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AUTHOR Fitzmaurice, Robert W.
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ABSTRACT

Five learning modules are included in this module cluster developed for use in the Glassboro State Teacher Education program: a) Identifying Elementary Science Programs, b) Inventorying Elementary Science Materials, c) Observing Elementary Science Programs, d) Teaching Elementary Science Lessons Using Available Materials, and e) Examining Elementary Science Materials and Programs at a Convention. Each module specifies an objective, prerequisites, instructional activities, pre- and post-measurement procedures, and remediation activities. (HMD)

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Reference System Designation: TSES - 001.00 (GSC).

Program: Seventh Cycle Teacher Corps Program at Glassboro State College, Glassboro, New Jersey.

Component: Teaching Science in the Elementary School.

Module Cluster: Introduction to Science Materials and Programs for the Elementary School.

Developer: Professor Robert W. Fitzmaurice

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Instructions for Using a Glassboro State College Modular Cluster

A Glassboro State College Modular Cluster aims at arranging a learning experience in a very specific way. The goal of the cluster is to facilitate successful, self-paced learning for as many students as possible.

1. Glassboro State College modular clusters are intended to be used by teacher education students with the cooperation of an instructor. The instructor will give a brief explanation about the particular modular cluster. This should include the rationale for the cluster as well as general arrangement for completing the module.

2. After the meeting with the instructor, the student can begin work on the modular cluster. Within a cluster the modules are presented sequentially.

3. When a student begins to study a module, he should read over the pre-assessment procedures. A number of alternatives are then available. For example the student may decide after reading the pre-assessment procedures that he is competent in that skill area. He may then complete the entire pre-assessment test and discuss the result with the instructor. The instructor will then be able to verify the student's competence.

4. A second choice is possible if the student feels unsure of the material as presented in the pre-assessment. He can then skip the pre-assessment and complete the module step by step, including the post-assessment procedures.

5. The instructor will consult with the student after he has finished the post-assessment. At this point if the student and instructor feel the competency involved has been demonstrated, the student will move to the next module in the cluster. If the post-assessment reveals some deficiency, remediation will be assigned and another form of post-assessment will then be used.

TSES - 001.00 (GSC) Introduction to Elementary School Science Materials and Programs

General Objectives of Module Cluster

The purpose of this cluster is to enable students to identify instructional programs in elementary school science, to inventory elementary science materials, to observe elementary science programs in public schools, to teach elementary science lessons using available science materials, and to attend a convention to examine elementary science materials and programs.

The ability to identify instructional materials and programs in elementary school science is assumed to be a prerequisite for teaching science in elementary school and for designing individualized learning packages in science for pupils.

Prerequisites to the Module Cluster

This module cluster does not require students to have any prerequisite competencies other than those which typically would be considered as program entrance requirements.

Modules Within the Module Cluster

This module cluster contains five modules; these are as follows:

TSES - 001.01 (GSC) : Identifying Elementary Science Programs
TSES - 001.02 (GSC) : Inventorying Elementary Science Materials
TSES - 001.03 (GSC) : Observing Elementary Science Programs
TSES - 001.04 (GSC) : Teaching Elementary Science Lessons Using Available Materials
TSES - 001.05 (GSC) : Examining Elementary Science Materials and Programs at a convention.

TSES - 001.01 (GSC) Identifying Elementary Science Programs

Instructional Objective *

The student will be able to identify and list six catagories of elementary school science instructional programs for grade levels kindergarten through six.

Prerequisite

None

Pre-Assessment

Pre-assessment procedures consist of a pencil and paper test through which the student has an opportunity to demonstrate competency relevant to the objective. A copy of such a test is available from the instructor.

Instructional Activities

The student has the following alternatives available to him.

1. Attend seminar which focuses on the taxonomic categories.
2. Read Developing Children's Thinking Through Science by Anderson et. al. Chaper 6 - Curricular Design with special emphasis on Chapter 7 - Resources.
3. Use resources of the Glassboro State College Savitz Library-Learning Resource Center including SEIMC and Curriculum Laboratory.
4. Attend the New Jersey Education Association Annual Convention in Atlantic City.
5. Attend the National Science Teachers Association Annual Convention or Regional Convention

Post-Assessment

Post-assessment procedures consist of alternate forms of the pre-assessment.

Remediation

No remediation activities have been predetermined. These would be decided upon by the student in consort with his faculty advisor and/or team leader.

* Instructional objectives specify the competencies a student is to acquire and demonstrate.

TSES - 001.02 (GSC) Inventorying Elementary Science Materials

Instructional Objective

The student will be able to inventory and record on the appropriate forms the elementary science materials and programs in a classroom and identify the materials and programs consistent with module TSES - 001.01 (GSC)

Prerequisite

TSES - 001.01 (GSC)

Pre-Assessment

Pre-assessment procedures consist of an informal interview of the student by his instructor who would determine the students level of competence relevant to the objective.

Instructional Activities

Obtain Inventory Form from Instructor and receive instruction on its use.

Post-Assessment

1. Turn in completed Inventory Forms to the Instructor for evaluation.
2. Meet with Instructor or Designated Evaluator to discuss Inventory Form content.

Remediation

No remediation activities have been predetermined. These would be decided upon by the student in consort with his faculty advisor and/or team leader.

TSES - 001.03 (GSC) Observing Elementary Science Programs

Expressive Objective *

The student will observe a certified teacher present a science lesson to elementary school children.

Prerequisite

TSES - 001.01 (GSC)

Pre-Assessment

None. However, if the student has already made an observation the expressive objective is satisfied.

Instructional Activities

Optional: Meet with Instructor to discuss any questions regarding assignment.

Post-Assessment

Meet with Instructor or Designated Evaluator to discuss materials used in the lesson observed.

Remediation

No remediation activities have been predetermined. These would be decided upon by the student in consort with his faculty advisor and/or team leader.

* Expressive objectives specify events the student is to experience. The student has met the objective when he has experienced the event specified. Therefore, the notions of pre-assessment and post-assessment do not hold except as formal or informal procedures might be used to determine whether or not the student has had the experience specified.

TSES - 001.04 (GSC)

Teaching Elementary Science Lessons Using Available Elementary Science Materials and Programs.

Expressive Objective

The student will teach an elementary science lesson(s) to elementary school children using available instructional materials and programs.

Prerequisite

TSES - 001.03 (GSC)

Pre-Assessment

None. However, if the student has already taught a lesson the expressive objective is satisfied.

Instructional Activities

Optional: Meet with Instructor to discuss any questions regarding assignment.

Post-Assessment

Meet with Instructor or Designated Evaluator to discuss materials used in the lesson taught.

Remediation

No remediation activities have been predetermined. These would be decided upon by the student in consort with his faculty advisor and/or team leader.

TSES - 001.05 (GSC) Examining Elementary Science Materials and Programs at a Convention

Expressive Objective

The student will examine elementary science materials and programs at a convention.

Prerequisite

TSES - 001.01 (GSC)

Pre-Assessment

None. However, if the student has already examined materials at a convention the expressive objective is satisfied.

Instructional Activities

Optional: Meet with Instructor to discuss any questions regarding assignment.

Post-Assessment

Meet with Instructor or Designated Evaluator to discuss the materials examined at the convention.

Remediation

No remediation activities have been predetermined. These would be decided upon by the student in consort with his faculty advisor and/or team leader.